

Appl. No. 09/683,648  
Amdt. dated January 07, 2005  
Reply to Office action of 10/14/2004

REMARKS

In response to the rejections under 35 USC 102 set forth in the abovementioned Office action, the Applicant presents the following arguments:

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1. **Claims 1-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hashimoto et al., U.S. Patent 5,963,516 (hereafter Hashimoto).**

10 Response:

Claim 1: Regarding the rejection of claim 1, the Examiner indicates that the claimed invention is taught by Hashimoto in that primarily, the "TE SET TO Vc" signal referred to in Fig.17 of the cited art relates to "corrected tracking error signal" of the claimed invention. The Applicant points out that there is significant difference both between the two waveforms, and the direction of the respective inventions. Chiefly, the claimed invention, being directed at high-speed track locking in an optical disc drive, produces a corrected tracking error signal by mirroring the off-track portion of the tracking error signal from a reference point onwards (as illustrated by Fig.4 of the claimed invention application disclosure), i.e. at a point where the optical pick-up head transitions from on-track to off-track. Whereas Hashimoto, being directed at reducing tracking error offset due to non-linearity in the optical pick-up

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5 head light path, seeks to reduce accumulated error in the  
DC bias of the tracking error signal by simply masking  
the off-track portion of same, i.e. the tracking error  
signal is held at zero volts for the duration of the  
off-track period. Hence, while both the "TE SET TO Vc"  
signal of the cited art and the corrected tracking error  
signal of the claimed invention both feature the on-track  
portions of their respective tracking error waveforms,  
the off-track portion of the cited art merely remains at  
10 zero volts until the beginning of the next on-track period.  
The claimed invention corrected tracking error signal  
waveform, however, features a mirror of the tracking error  
signal for the corresponding off-track period.

15 The Applicant therefore asserts that both the derivation  
and direction of the corrections to the tracking error  
signal of Hashimoto's invention and that of the claimed  
invention are different, as can be seen by comparing the  
Applicant's corrected tracking error signal 52 of Fig.4  
20 with Hashimoto's "TE SET TO Vc" signal of Fig.17. The  
Applicant asserts that the nature of the claimed invention  
corrected tracking error signal is unambiguously  
reflected by the base claim reciting "when the pick-up  
device is located at a target track related to the  
25 off-track period, the corrected tracking error signal  
being modified from a reference point onward, to mirror  
the subsequent half cycle of the tracking error signal,"  
and clearly supported in the specification and drawings.

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Similarly, Hashimoto does not teach or fairly suggest the  
"TE SET TO Vc" as "modified...to mirror the subsequent  
half cycle of the tracking error signal." Thus,  
reconsideration of claim 1 is politely requested.

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Claim 2: Regarding claim 2, the Applicant seeks to clarify that  
'the mirror signal' referred to is not the mirror signal  
known within the art as the discrete signal representative  
of whether the optical pick-up head is positioned on or  
10 off track, rather it refers to the mirror of "the  
subsequent half cycle of the tracking error signal"  
mentioned in the base claim. That it is not the 'mirror  
signal' of the prior art as defined above, is supported  
by context, i.e. that it (the mirror signal) "is obtained  
15 by taking the reference signal as a reference to convert  
the tracking error signal", which as will be appreciated  
by one versed in the art, does not describe the prior art  
mirror signal. Claim 2, being dependent upon claim 1,  
should be allowed if claim 1 is found to be allowable.

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Claim 3: Regarding claim 3, as Hashimoto teaches referencing the  
off-track portion(s) of the corrected tracking error  
signal to zero volts and claim 3 refers to the  
corresponding off-track periods according to the claimed  
25 invention, by Hashimoto's teachings the tracking error  
signal cannot be proportional to anything during these  
periods (except a zero value), and consequently cannot  
reflect the conditions stated by claim 3, i.e. that "the

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corrected tracking error signal is approximately proportional to a distance between the pick-up device and the target track. " Claim 3, being dependent upon claim 1, should be allowed if claim 1 is found to be allowable.

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Claim 4: Regarding claim 4, the on-track portions of the tracking error signal and the corrected tracking error signal are the same, i.e. the aforementioned portion of the tracking error signal is unmodified by the claimed invention. Hence claim 4 is included by way of further defining the claimed invention and, being dependent upon claim 3, should be allowed if claim 3 is found to be allowable.

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Claim 5: Claim 5, being dependent upon claim 1, should be allowed if claim 1 is found to be allowable.

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Claim 6: Claim 6, being dependent upon claim 5, should be allowed if claim 5 is found to be allowable.

Claim 7: Regarding claim 7, the Examiner's rejection of this claim is based upon similar reasons to those set forth against the method base claim, claim 1. Therefore if the argument included herein in support of claim 1 is found to be persuasive and claim 1 allowed, claim 7 should also be allowed. Reconsideration of claim 7 is politely requested.

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Claims 8 & 10: Claims 8 & 10, being dependent upon claim 7 and

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having been rejected for similar reasons, should be  
allowed if claim 7 is found to be allowable.

5           Claim 9: Claim 9 is an apparatus claim corresponding to claim  
            4 and dependent upon claim 7, and hence should be allowed  
            if claim 7 is found to be allowable and the arguments  
            pertaining to claims 1 or 4 be considered persuasive.

10          Claim 11: Claim 11, being dependent upon claim 10 and having been  
            rejected for similar reasons, should be allowed if claim  
            10 is found to be allowable.

15          The Applicant respectfully requests that the above claims  
            be reconsidered in light of the arguments set forth herein. No  
            new matter is entered by this disclosure.

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Sincerely yours,

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